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AD NUMBER	
AD505681	
CLASSIFICATION CHANGES	
TO:	unclassified
FROM:	confidential
LIMITATION CHANGES	
TO:	Approved for public release, distribution unlimited
FROM:	Controlling DoD Organization: Office of the Assitant Chief of Staff for Force Development [Army], Washington, DC 20310.
AUTHORITY	
Adjutant General's Office [Army] ltr dtd 29 Apr 1980; Adjutant General's Office [Army] ltr dtd 29 Apr 1980	

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**DEPARTMENT OF THE ARMY  
OFFICE OF THE ADJUTANT GENERAL  
WASHINGTON, D.C. 20310**

IN REPLY REFER TO

AGDA (M) (29 Oct 69) FOR OT UT 693037

6 November 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 2d Battalion,  
94th Artillery, Period Ending 31 July 1969 (U)

SEE DISTRIBUTION

This document is being distributed to the National  
Academy of the Arts and Sciences and  
the National Academy of Sciences to be  
included in their reports.

1. Subject report is forwarded for review and evaluation in accordance  
with paragraph 5b, AR 525-15. Evaluations and corrective actions should  
be reported to AGSFOR OT UT, Operational Reports Branch, within 90 days  
of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate  
benefits in the future from lessons learned during current operations and  
may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

*Kenneth G. Wickham*

KENNETH G. WICKHAM  
Major General, USA  
The Adjutant General

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  - 2d Battalion, 94th Artillery

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DEPARTMENT OF THE ARMY  
HEADQUARTERS, 2D BATTALION 94TH ARTILLERY  
APO SAN FRANCISCO 96269

AVGLC-CO

9 August 1969

SUBJECT: Operational Report of 2d Battalion 94th Artillery for Period  
Ending 31 July 1969, RCS CSFOR-65 (RI)

1. Section 1. Operations: Significant Activities: At the beginning of the reporting period the battalion was deployed at the following locations: Headquarters and Headquarters Battery at LZ Nancy (YD 434400); Battery A at Camp Evans (YD 543311); Battery B at Gia Le (YD 830150); Battery C at LZ Nancy (YD 434400); and Service Battery remained at Dong Ha Combat Base (YD 219598). The mission of the battalion was general support XXIV Corps, reinforcing the 101st Airborne Division Artillery (Airmobile) (Batteries A and B), reinforcing the 12th Marine Regiment (Battery C), establish a quick fire channel to 101st Airborne Division Artillery (Airmobile) from Battery C. The battalion continuously supported combat operations during the past quarter. During the reporting period the battalion fired 8,903 missions expending 25,218 8" projectiles. The majority of the missions were fired at interdiction targets. The expenditure of ICM increased as the 101st Airborne Division Artillery (Airmobile) TPS-25 ground surveillance radar acquired a significantly higher number of targets. On 301800 May 69 a 24 hour ceasefire was placed in effect to commemorate Buddha's birthday. The battalion promptly resumed fire on 311800 May 69 with a battalion TOT. On 17 June 69, Battery A participated in a TOT on a suspected enemy battalion resulting in 50 enemy KIA. On 8 July 69, Battery A again participated in a TOT on another suspected enemy battalion resulting in 60 KIA. The increased accuracy of intelligence reporting is highly encouraging. On 8 July 69, Battery A moved from Camp Evans (YD 543311) to LZ Sally (YD 635274) to better support the operations of the 101st Airborne Division. On 14 July 69, Lieutenant Colonel William H. Krueger assumed command of the battalion. The battalion received the Annual General Inspection from 28 July to 31 July 69. The unit was rated overall satisfactory. All batteries received enemy rocket and mortar attacks during the reporting period. There were no casualties or equipment damage as a result of these attacks. A battalion liaison team with the ARVN 11th Artillery at FSB Bradley underwent a sapper attack. The enemy was repelled. The team's radio operator was severely wounded by enemy grenades. The battalion has experienced no drastic personnel shortages during the reporting period. The battalion continues to carry a C4 rating on the monthly FOR-STAT-D report. A shortage of PLL fill, and the lack of some reportable items of mission essential equipment, continued to keep the battalion at this low rating level. However, an improvement in both areas was noted during the quarter. Training for the last quarter was primarily oriented towards firing battery procedures, gunnery, replacement training, and maintenance procedures. The battalion continued to enjoy a very high availability rate with the M110 howitzer. During the 1,104 days available the weapons were down only 13 days for an availability percentage of 99%. The civil affairs program was limited to weekly MEDCAP's to outlying villages. This conservative, but well received program, has been mutually beneficial for the patients

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9 August 1969

SUBJECT: Operational Report of 2d Battalion 94th Artillery for Period  
Ending 31 July 1969, RCS CSFOR-65 (RI)

and the battalion. The firing batteries were inspected by the XXIV Corps Artillery Firing Battery Inspection Team. All batteries received satisfactory ratings. The Corps GMI Teams conducted inspections of each battery. All units passed the inspection. The battalion has fired 272,321 rounds since arriving in country.

### 2. Section 2. Lessons Learned: Commander's Observations, Evaluations and Recommendations.

#### a. Personnel - None

#### b. Operations

##### (1) Use of MOS 13E20 in the Firing Battery Recorder Position.

(a) Observation. The present TOE (6-437G) provides for a 13A10 as the firing battery recorder. An individual possessing MOS 13E20 is more knowledgeable of fire direction procedures and data, and is more qualified to perform as recorder.

(b) Evaluation. The use of fire direction trained personnel as battery recorders has substantially increased the rapid flow of firing data from the FDC to the guns. A 13E20 better understands the fire direction process, can anticipate the proper flow of data, and can detect gross errors in firing data that may be inadvertently sent to the guns. A recorder must be familiar with both fire direction and firing battery techniques. It is easier to familiarize a 13E20 with firing battery procedures than to train a 13A10 in fire direction computations. A recommended change to the present TOE has been forwarded by this unit.

(c) Recommendation. That other artillery battalion's consider the use of 13E20 trained personnel as firing battery recorders.

##### (2) Elimination of the Rheostat Control for the M1 Collimator.

(a) Observation. During night fire missions, the rheostat control on the M1 collimator remote control box has proven unsatisfactory.

(b) Evaluation. The rheostat on the M1 collimator remote control box has intermittently shorted out during night firing. The direct support unit has been unable to determine the cause of the short circuit. Further, the necessity for varying the intensity of the light has not been experienced by this unit. An EIR is being submitted by this unit for the elimination or improvement of the rheostat.

(c) Recommendation. That (1) a study be conducted for the improvement of the rheostat in the M1 collimator remote control box, or (2) that the rheostat be deleted from the control box and the single toggle switch be the sole means of lighting the collimator.

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**SUBJECT:** Operational Report of 2d Battalion 94th Artillery for Period  
Ending 31 July 1969, RCS CSFOR-65 (RI)

**(3) Cooling of AN/VRC-12 Series Radios.**

(a) Observation. FM radio sets, especially in buildings and bunkers, frequently overheat due to the extreme climatic conditions experienced in Southeast Asia.

(b) Evaluation. In an attempt to reduce problems of overheating, radios positioned in bunkers and buildings have had the top covers removed and the module assemblies lifted upright. This exposed the components to circulating air and also prevented heat from being retained within the radio case assembly. Due to this action, the FM radio deadline rate in this unit has been significantly reduced.

(c) Recommendation. That other units in hot or tropical climates consider the use of this technique for prevention of radio overheating problems.

**(4) Construction of Sapper Screens for Entrances to Fire Direction Centers.**

(a) Observation. Artillery fire direction centers are often the primary target for sapper attacks and satchel charges.

(b) Evaluation. A screen door has been constructed using 2" X 6" planks of wood and cyclone fence to protect the entrance of the FDC from satchel charges and sappers. The door can be secured from inside the FDC by chain, and access into the FDC is controlled by using a telephone located outside the bunker. Although the door can be breached, the time involved would permit the reaction force to respond.

(c) Recommendation. That other artillery units consider the use of sapper screens to protect their FDC's.

**(5) Use of Battery Average Ballistic Corrections**

(a) Observation. Frequent registrations of all 8" howitzers in a firing battery, and averaging their ballistic corrections, produces more accurate firing data than base piece registration.

(b) Evaluation. The use of base piece registrations to obtain corrections for a firing battery contain inherent inaccuracies. By frequent registrations of each howitzer in an 8" firing battery, individual ballistic piece velocity error (VE) and deflection corrections are determined. Individual corrections are used to obtain battery average ballistic corrections. During "adjust fire" missions, Met data is applied to battery average ballistic corrections to obtain firing data. During single-gun missions, such as interdiction or destruction missions, individual piece ballistic corrections, plus meteorological corrections, are used. This procedure has been utilized by this unit, and has provided accurate, effective fire, and excellent target coverage.

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9 August 1969

SUBJECT: Operational Report of 2d Battalion 94th Artillery for Period  
Ending 31 July 69, RCS CSFOR-65 (RI)

(c) Recommendation. That heavy artillery batteries consider the use of the above mentioned procedures for increased accuracy and coverage of fires.

(6) Requirement for Distance Measuring Equipment (DME) in Artillery Survey Operations.

(a) Observation. Widely dispersed artillery batteries in RVN require the use of distance measuring equipment to bring all batteries in the battalion under common survey control.

(b) Evaluation. Due to unsecure terrain, battalion survey sections are often unable to traverse or top across country. Distance measuring equipment is essential to provide common survey control to the firing batteries. This equipment would permit rapid and accurate survey over long distances and could be emplaced on secure fire bases, thus eliminating the danger to the survey parties when crossing terrain that is not secure. The FSN for the DME is 6415-103-3692. A TOE change providing for the addition of two DME's is being submitted by this unit.

(c) Recommendation. That the distance measuring equipment be made available through normal supply channels pending the necessary approval of the recommended change to the TOE.

c. Training - None

d. Intelligence - None

e. Logistics

(1) Battalion Supply Runs to Outlying Batteries.

(a) Observation. Each outlying battery provided a vehicle, driver, and an assistant driver for a weekly run to battalion supply. This resulted in a redundant and inefficient use of equipment and personnel.

(b) Evaluation. In order to establish a more efficient system or resupply, the battalion S-4 was given the responsibility of resupplying each outlying battery. To expedite this plan, each battery sends a list of required supplies and unserviceable items to the battalion S-4 for direct exchange. The S-4 consolidates the lists, loads the requested items on S-4 vehicles, and makes a twice weekly trip to all outlying batteries. The necessary paperwork and trained personnel are sent with the supply truck to insure that a complete and proper supply transaction is made. This system has proven to be efficient both in speed of resupply and utilization of personnel and equipment.

(c) Recommendation. That decentralized units in Vietnam consider the use of a similar system of resupply to subordinate units.

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9 August 1969

SUBJECT: Operational Report of 2d Battalion 94th Artillery for Period  
Ending 31 July 1969, RCS CSFOR-65 (RI)

(2) Lack of Durability of the Polypropylene Sand Bag.

(a) Observation. Polypropylene sandbags deteriorate rapidly when used in a hot, tropical climate.

(b) Evaluation. Experience has shown that the life span of the polypropylene sandbag is three to four months. Due to this lack of durability, the periodic replacement of worn sandbags accounts for substantial combat expenditures and many lost man-hours.

(c) Recommendation. That (1) the appropriate agencies be informed of the lack of durability of the polypropylene sandbag, and (2) that a means be devised or developed to extend the useful life of the sandbag, or (3) develop a more durable sandbag.

f. Organization - None

g. Survival, Escape and Evasion - None

1 Incl  
Organization Diagram

*William H. Krueger*  
WILLIAM H. KRUEGER  
LIEUTENANT COLONEL, FA  
COMMANDING


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AVGL-C (9 Aug 69) 1st Ind  
SUBJECT: Operational Report of 2d Battalion 94th Artillery for Period  
Ending 31 July 1969, RCS CSFOR-65 (HI)

DA, HEADQUARTERS, 108th Artillery Group, ATTN: AVGL-C, APO 96269, 13 Aug 69

TC: Commanding General, XXIV Corps Artillery, ATTN: AVII-AT, APO 96308

Concur with recommendations made in section 2.

  
ROBERT V. LEE JR.  
Colonel, Field Artillery  
Commanding

AVII-ATC (10 Aug 69) 2d Ind

SUBJECT: Operational Report of 2d Battalion, 94th Artillery for  
the Period Ending 31 July 1969. RCS CSFOR-65 (RI)(U)

Headquarters, XXIV Corps Artillery, ATTN: AVII-ATC, APO San Francisco 96308  
21 August 1969

TO: Commanding General, XXIV Corps, ATTN: AVII-GCT, APO San Francisco 96308

1. (U) The ORLL of the 2d Battalion, 94th Artillery is forwarded in accordance with USARV Reg 525-15.

2. (U) This headquarters has reviewed subject report and concurs except as indicated below, and subject to comment provided.

a. Reference item concerning Significant Activities, page 1, paragraph 1, line 17 thru 20. Nonconcur. There are no official records of enemy KIA as a result of TOTs fired by Battery A on 17 June 1969 and 8 July 1969.

b. Reference item concerning use of MOS 13E20 in the Firing Battery Recorder Position, page 2, paragraph 2b(1). Nonconcur. The primary duties of the firing battery recorder are to (1) record firing data for each piece, (2) announce correct data for any piece as required, (3) keep a running account of ammunition fired and on hand within the firing section, and (4) help install and operate the executive officer's communication system. The use of a trained FDC computer (13E20) to accomplish these duties, considering the critical availability of trained personnel in this MOS, should not be considered.

c. Reference item concerning Cooling of AN/VRC 12 Series Radios, page 3, paragraph 2b(3). Nonconcur. Radios used in buildings and bunkers should be located to insure air circulation space between the back of the set and walls. If this is done, the radio integral heat exchanger will adequately cool the set.

d. Reference items on page 3 and 4, paragraphs 2b(4), (5) and 2e(1). Concur. These items will be disseminated to artillery with XXIV Corps via information letters. Recommend similar dissemination throughout Vietnam by HQs USARV.

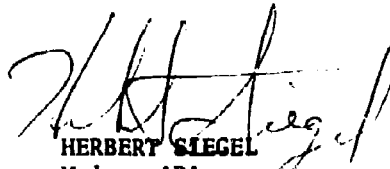
e. Reference item concerning Requirement for Distance Measuring Equipment (DME), page 4, paragraph 2b(6). Nonconcur. Paragraph 21 b of FM 6-2 requires battalion to establish survey control (5th order) to its batteries. However, due to the widely dispersed battery locations and the battalion's present personnel and equipment authorizations, this requirement cannot be accomplished. The survey sections of the XXIV Corps Artillery, 108th Artillery Battalion, 101st Airborne Division (AM), and 12th Marine Regiment are providing 4th order survey to all Fire Support Bases (FSBs) in the XXIV Corps

AVII-ATC 2d 7.8.

SUBJECT: Operational Report of 2d Battalion, 94th Artillery for  
the Period Ending 31 July 1969. RCS CSFOR-65 (RI)(U)

A0. This procedure provides each battery with a higher order of survey and  
insures effective utilization of the critically short DMs.

FOR THE COMMANDER:

  
HERBERT SIEGEL  
Major, ADA  
Adjutant

MAIL-GCT (9 Aug 69) 3d Ind

MAJ Markl/jpg/2506

SUBJECT: Operational Report of 2d Battalion, 94th Artillery for the Period  
Ending 31 July 1969. RCS CSFOR-65 (R1) (U)

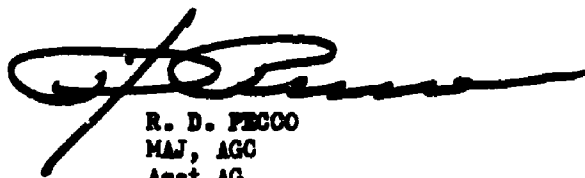
DA, Headquarters, XXIV Corps APO SF 96308 27 AUG 1969

TO: Commanding General, United States Army, Vietnam, APO SF 96375

1. The ORLL of the 2d Battalion, 94th Artillery has been reviewed at HQ, XXIV Corps and is forwarded in accordance with USARV Reg 525-15.

2. Concur with the report as indorsed by XXIV Corps Artillery.

FOR THE COMMANDER:



R. D. FECCO  
MAJ, AGC  
Asst AG

AVHGC-DST (9 Aug 69) 4th Ind

SUBJECT: Operational Report of 2d Battalion, 94th Artillery for Period  
Ending 31 July 1969, RCS CSFOR-65 (R1)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco  
96375 8 OCT 1969

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,  
APO 96558

1. This headquarters has reviewed the Operational Report Lessons Learned for the quarterly period ending 31 July 1969 from Headquarters, 2d Battalion, 94th Artillery.

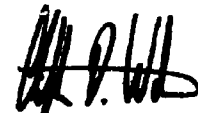
2. Comments follow:

a. Reference item concerning "Construction of Sapper Screens for Entrances to Fire Direction Centers", section II, page 3, paragraph 2b(4); concur. This item has been extracted and will be further evaluated for possible inclusion in a USARV Training Newsletter. Additional guidance is contained in USARV Regulation No. 350-5, Counter Sapper Training, dated 22 April 1969.

b. Reference item concerning "Use of Battery Average Ballistic Corrections", section II, page 3, paragraph 2b(5); concur. This item has been extracted and will be further evaluated for possible inclusion in a USARV Training Newsletter.

c. Reference item concerning "Lack of Durability of the Polypropylene Sand Bag", section II, page 5, paragraph 2e(2); concur. The problems associated with polypropylene sandbags have been identified and documented. USARV has requested that only acrylic sandbags be supplied to this command. Acrylic sandbags are of improved quality and correct most of the problems associated with the polypropylene sandbags. After the on-hand stock of polypropylene sandbags has been consumed, acrylic sandbags will be supplied.

FOR THE COMMANDER:



C. D. WILSON  
1LT, AGC  
Assistant Adjutant General

Cy furn:  
2/94th Arty  
XXIV Corps

OPPOP-DT (9 Aug 69) 5th Ind (U)

SUBJECT: Operational Report of HQ, 2d Bn, 94th Arty for Period Ending  
31 July 1969, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 16 OCT 69

TO: Assistant Chief of Staff for Force Development, Department of the  
Army, Washington, D. C. 20310

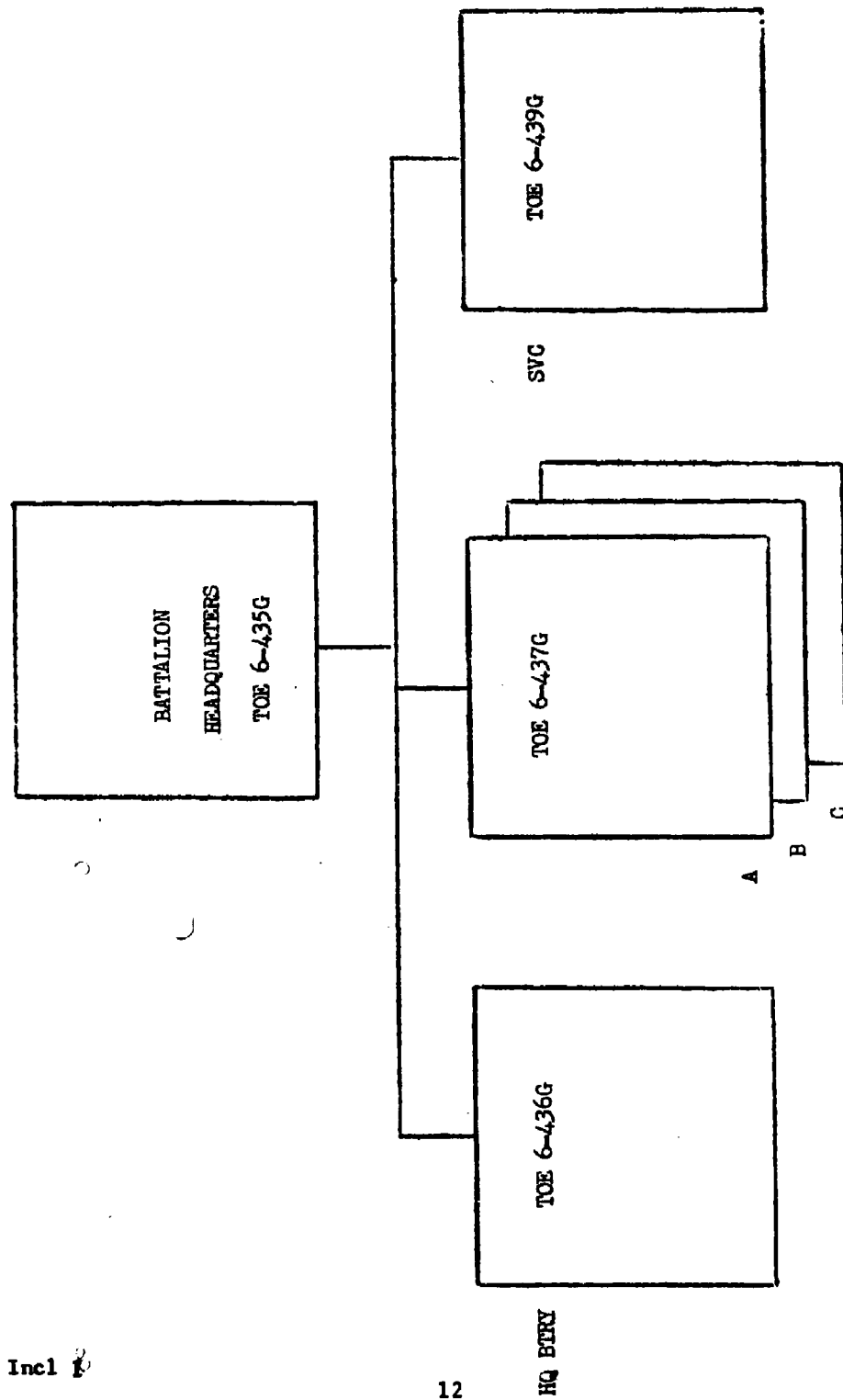
This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

  
C. L. SHORTT  
CPT, AGC  
Asst AG

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Security Classification

## DOCUMENT CONTROL DATA - R &amp; D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY (Corporate author)		2a. REPORT SECURITY CLASSIFICATION	
HQ, OACSFOR, DA, Washington, D.C. 20310		CONFIDENTIAL	
3. REPORT TITLE		2b. GROUP	
Operational Report - Lessons Learned, HQ, 2d Battalion, 94th Artillery		4	
4. DESCRIPTIVE NOTES (Type of report and inclusive dates)			
Experiences of unit engaged in counterinsurgency operations. 1 May 69 to 31 July 69.			
5. AUTHOR(S) (First name, middle initial, last name)			
CO, 2d Battalion, 94th Artillery			
6. REPORT DATE		7a. TOTAL NO. OF PAGES	7b. NO. OF REFS
9 August 1969		15	
8a. CONTRACT OR GRANT NO.		8b. ORIGINATOR'S REPORT NUMBER(S)	
b. PROJECT NO		693037	
c. N/A		9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)	
d.			
10. DISTRIBUTION STATEMENT			
11. SUPPLEMENTARY NOTES		12. SPONSORING MILITARY ACTIVITY	
N/A		OACSFOR, DA, Washington, D.C. 20310	
13. ABSTRACT			
13			

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